RB397(USA)

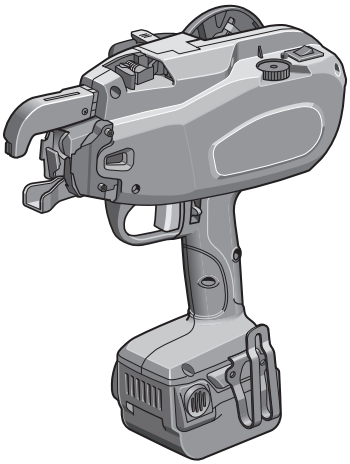
MAX®

RE·BAR-TIER™

RE-BAR TYING TOOL

OUTIL POUR LIER LES BARRES D'ARMATURE

HERRAMIENTA LIGADORA DE BARRAS DE RE-FUERZO



OPERATING and MAINTENANCE MANUAL
MANUEL D'OPERATION ET D'ENTRETIEN
MANUAL DE OPERACIÓN Y MANTENIMIENTO

WARNING

BEFORE USING THIS TOOL, STUDY THIS MANUAL TO ENSURE SAFETY WARNING AND INSTRUCTIONS.
KEEP THESE INSTRUCTIONS WITH THE TOOL FOR FUTURE REFERENCE.

AVERTISSEMENT

AVANT DíUTILISER CET OUTIL, LIRE CE MANUEL ET LES CONSIGNES DE SECURITE AFIN DE GARANTIR UN FONCTIONNEMENT SUR.
CONSERVER CE MANUEL EN LIEU SUR AVEC LíOUTIL AFIN DE POUVOIR LE CONSULTER ULTERIEUREMENT.

ADVERTENCIA

PARA EVITAR GRAVES DAÑOS PERSONALES O EN LA PROPIEDAD.
ANTES DE EMPLEAR LA HERRAMIENTA, LEER CON ATENCIÓN Y COMPRENDER LOS SIGUIENTES INSTRUCCIONES DE SEGURIDAD.

ENGLISH

OPERATING and MAINTENANCE MANUAL

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WARNING

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1. SAFETY INSTRUCTIONS

WARNING

TO AVOID SEVERE PERSONAL INJURY OR PROPERTY DAMAGE
BEFORE USING THE TOOL, READ CAREFULLY AND UNDERSTAND THE FOLLOWING "SAFETY INSTRUCTIONS":

PRECAUTIONS ON USING THE TOOL

This equipment is a tool for use in tying re-bars. Using this equipment for other applications or in ways not specified in the manual may lead to serious accident. Be sure to strictly observe the items written in this manual. Persons not concerned with the work, particularly children, should be kept away from the work site and should not be allowed to touch this equipment.

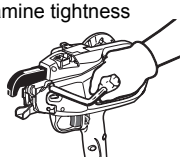
1. **WEAR SAFETY GLASSES OR GOGGLES**
   The employer and the user must make sure that proper eye protection is worn when the tool is being used. Eye protection equipment must conform to the requirements of the American National Standards Institute, ANSI Z87.1 (Council Directive 89/686/EEC of 21 DEC. 1989) and it must provide frontal and side protection.
   NOTE: Nonside-shielded spectacles and face shields alone do not provide adequate protection.

2. **EAR PROTECTION MAY BE REQUIRED IN SOME ENVIRONMENTS**
   Because working conditions may include exposure to high noise levels that could lead to hearing damage, the employer and the user should make sure that necessary hearing protection is provided and used by the operator and others in the work area.

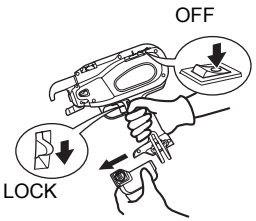
3. **DO NOT ALLOW CHILDREN NEAR THE TOOL**
   Allow no bystanders, especially children, near the tool during its operation.

4. **DO NOT USE THE TOOL IN THE RAIN, WHERE WATER IS SPLASHING, IN A WET PLACE, OR IN A DAMP PLACE**
   Using the tool in these or similar conditions will increase the risk of electric shock, dangerous malfunction, and overheating.

Examine tightness



5. **INSPECT THE PARTS BEFORE MOUNTING THE BATTERY PACK**
   - Examine the screws to make sure they are securely tightened.
     Incomplete tightening may result in an accident or breakage. If a screw is loose, retighten it completely.
   - Inspect parts for damage.
     Parts will wear over periods of use. Look also for missing and defective parts and for parts of poor quality. If a part must be replaced or repaired, purchase the replacement part at an authorized MAX Co., Ltd. distributor.
     Use only genuine authorized replacement parts.



6. **BE SURE TO SET THE MAIN SWITCH TO OFF, TO LOCK THE TRIGGER, AND DETACH THE BATTERY PACK WHEN CHANGING THE BATTERY PACK, WHEN REPLACING OR ADJUSTING THE TIE-WIRE, WHEN ABNORMALITIES OCCUR, AND WHEN THE EQUIPMENT IS NOT BEING USED**
   Leaving the equipment switched on in these situations may cause breakdowns or damage.

7. **KEEP FINGERS AND BODY PARTS CLEAR OF THE FEEDER ARM AND CURL GUIDE AT ALL TIMES**
   Failure to do so may result in serious injury.

8. KEEP FINGERS AND BODY PARTS AWAY FROM THE TIE-WIRE REEL WHEN TOOL IS IN OPERATION
Failure to do so may result in serious injury.

9. DO NOT POINT THE TOOL AT ANYONE
Personal injury may result if the tool catches an operator or anyone working near him. While working with the tool, be extremely careful not to bring hands, legs, and other body parts near the arm of the tool.

10. WHEN THE TOOL IS NOT IN OPERATION KEEP YOUR FINGERS OFF THE TRIGGER
Failure to do so may cause accidental tying, leading to serious injury.

11. NEVER OPERATE THE TOOL UNDER ANY ABNORMAL CONDITION
If the tool is not in good working order, or if any abnormal condition is noticed, switch it off immediately (set the Main switch at OFF), lock the Trigger and have it examined and repaired.

12. AFTER BATTERY INSTALLATION IF THE TOOL OPERATES WITHOUT THE TRIGGER BEING PULLED OR THE OPERATOR NOTICES UNUSUAL HEAT, SMELL, OR SOUND, DISCONTINUE OPERATION
Failure to do so may lead to serious injury. Return to dealer for safety inspection.

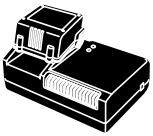
13. NEVER MODIFY THE TOOL
Modifying the tool will impair performance and operating safety. Any modification may lead to serious injury and void the tool warranty.

14. MAINTAIN THE TOOL IN GOOD OPERATING CONDITION
To secure operating safety and ensure top performance, keep the tool free of wear and damage. Also keep the tool's hand grip dry and clean, especially free of oil and grease.

JPL914

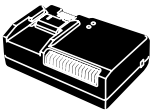
15. USE ONLY THE AUTHORIZED BATTERY PACK

Use only MAX JPL914 battery pack. If the tool is connected to a power supply other than the authorized pack, such as a re-chargeable battery, a dry cell, or a storage battery for use in automobiles, the tool may be damaged, break down, overheat, or even catch on fire. Do not connect this tool to any power supply except the MAX JPL914 battery pack.


JC928

16. TO ENSURE MAXIMUM PERFORMANCE, FULLY CHARGE THE BATTERY BEFORE USE

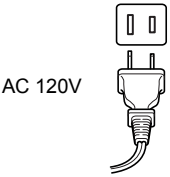
A new battery pack or one not used for extended periods may have self-discharged and thus may need recharging to restore it to a fully charged condition. Before operating the tool, make sure to charge the Battery pack with the designated MAX Battery charger JC928.


JC928

17. BATTERY CHARGING PRECAUTION

1 Use only MAX Battery charger JC928 and Battery Pack JPL914

Failure to do so may cause the Battery to overheat or catch fire leading to serious injury.



2 Charge the Battery from AC 120V wall sockets

Failure to do so may result in overheating, or inadequate charging possibly causing serious injury.

3 Never use a transformer

4 Never connect the Battery charger to an engine generator direct-current power supply

The charger will break down or be damaged from burning.

5 Avoid charging the Battery pack in the rain, in a damp place, or where water is splashing

Charging a damp or wet Battery pack will cause an electric shock or a short circuit that may lead to damage from burning and even the tool catching on fire.

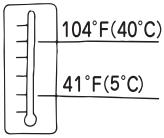
6 Do not touch the power cord or plug with a wet hand or glove
This may cause injury from electric shock.

7 Do not put a cloth or any other cover on the Battery charger while the Battery pack is being charged
This will cause overheating and damage from burning, or the Charger may even catch fire.

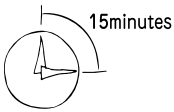
8 Keep the Battery pack and Battery charger away from heat and flames

9 Do not charge the Battery pack near flammable materials

10 Charge the Battery pack in a well ventilated place
Avoid charging the Battery pack where it will be in direct sunlight.



11 Charge the Battery pack in a temperature range of 41°F (5°C) to 104°F (40°C)



12 Avoid continual use of the Battery charger
Rest the Charger for 15 minutes between charges to avoid functional trouble with the unit.

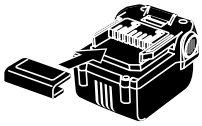
13 Any objects that block the ventilation holes or Battery pack receptacle may cause electric shock or functional troubles
Operate the charger free of dust or other foreign materials.

14 Handle the power cord carefully
Do not carry the Battery charger by its power cord. Do not use the power cord to disconnect it from a wall socket; this will damage the cord and break the wires or cause a short circuit. Do not let the power cord contact sharp edged tools, hot materials, oil, or grease. A damaged cord must be repaired or replaced.

15 Do not charge non rechargeable batteries with this charger.

16 This charger is not intended for use by children or disabled persons without supervisor.

17 Children should be supervised to ensure that they do not play with the charger.



18 Put a pack cap on the terminal of the Battery pack

When the Battery pack is not in use, put a pack cap on its terminal to prevent short circuits.

19 Do not let the terminal (metal component) of the Battery pack short-circuit

A short circuit in the terminal will generate a large current, causing to overheat the Battery pack and become damaged.

20 Do not leave or store the tool in a vehicle or in direct sunlight during summer. Leaving the tool in high temperature conditions may cause the battery pack to deteriorate.

21 Do not store a fully discharged battery pack. If a fully discharged battery pack is removed from the system and left for a long period of time, it may become damaged. Recharge the battery immediately when it has been discharged.

18. WEAR SAFETY GLOVES WHILE OPERATING THE TOOL

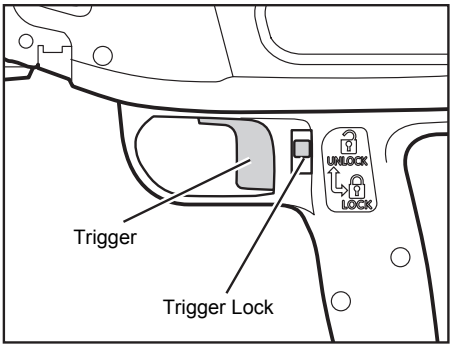
The finish tie has sharp edges. To avoid serious injures, be careful not to touch the sharp edges. MAX recommends wearing OSHA approved safety gloves while operating the tool.

2. SAFETY FEATURES

In order to ensure safety during operation, the RB397 has the following safety features.

WARNING

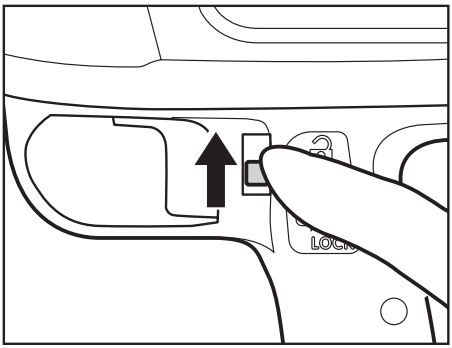
- **Prior to using the tool, make sure that the safety features function properly. If they do not, avoid using the tool.**



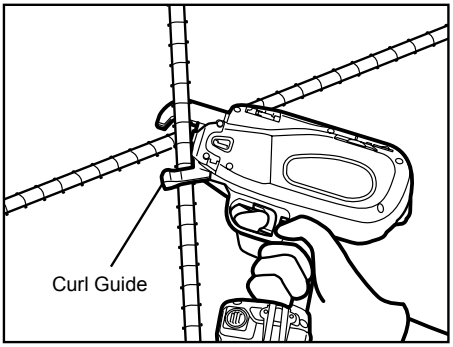
Trigger Lock

The Trigger can be locked preventing the tool from operating for safety. Always keep the Trigger locked when not in use.

Unless you are at tying work, set the trigger lock to the position of LOCK and remove a battery pack. When you start tying work, set it to the position of UNLOCK.



Pull to the left slightly and upwards to UNLOCK.

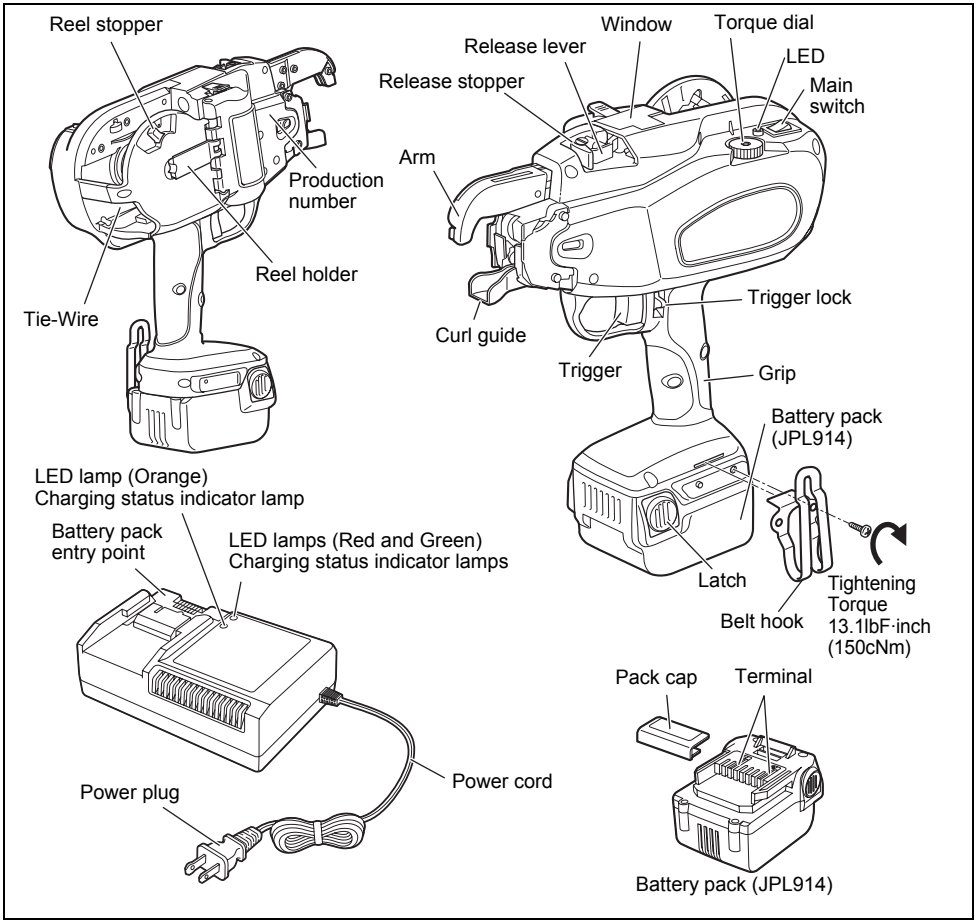


Curl Guide

When the Curl Guide is opened, it will emit a beeping sound and the tool does not operate.

3. SPECIFICATIONS AND TECHNICAL DATA

1. NAME OF PARTS



2. TOOL SPECIFICATIONS

PRODUCT NO.	RB397
WEIGHT	5.3lbs(Battery included)
HEIGHT	12"
WIDTH	4-1/8"
LENGTH	11-3/8"
WRAPS PER TIE	3wraps/tie
BATTERY	Li-ion14.4V/(JPL914)
ACCESSORIES	Battery pack JPL914 (1pc.) Battery Charger JC928 Carrying case, Belt hook Instruction video DVD
Operating temperature	14°F to 104°F (-10°C to 40°C)
Humidity	80% RH or less

<Battery charger>

Product name	MAX lithium ion battery charger
Product code	JC928
Input	AC120V 50/60Hz
Output	DC 7.2/10.8/14.4V 7A DC 18/21.6/25.2/28.8V 3.9A
Weight	3.3lbs
Operating temperature range	41°F to 104°F (5°C to 40°C)
Humidity	80% RH or less

<Battery pack>

Product name	**MAX lithium ion battery pack**
Product code	JPL914
Battery type	Lithium ion battery
Nominal voltage	DC14.4 V (3.6V × 4 cells)
Nominal capacity	3.0 Ah (3,000 mAh)
Charging time (When charger JC928 is used)	Quick charging - Approximately 30 minutes (Approximately 90% of capacity) Full charging - Approximately 45 minutes at 77°F (100% of capacity)
Accessories	Pack cap (For preventing short circuit)
Weight	1.1lbs
Charging temperature	41°F to 104°F (5°C to 40°C)
Operating temperature	14°F to 104°F (-10°C to 40°C)
Operating humidity	80% RH or less

3. WIRE SPECIFICATIONS

NAME	**MAX TIE-WIRE**
MODEL	TW897A
DIAMETER	21GA. (0.8 mm)
LENGTH	312feet/coil
TIES PER COIL	RB397 Approx. 120 ties/coil
TIES PER CHARGE	Approx. 1400 ties/charge

BATTERY CHARGER:
Use only an authorized Battery charger, MAX JC928.

4. TECHNICAL DATA

① NOISE
A-weighted single-event ------ LWA, 1s, d 86 dB
sound power level
A-weighted single event ------ LpA, 1s, d 76 dB
emission sound pressure
level at work station
These values are determined and documented in accordance to EN12549 : 1999.

② VIBRATION
Vibration characteristic value - 1.8 m/s^2
These values are determined and documented in accordance to ISO 8662-11.
This value is a tool-related characteristic value and does not represent the influence to the hand-arm-system when using the tool. An influence to the hand-arm-system when using the tool will, for example, depend on the gripping force, the contact pressure force, the working direction, the adjustment of main supply, the workpiece, the workpiece support.

③ RADIATED EMISSION 30-1000 MHZ
Class B

WARNING

This equipment has been verified to comply with the limits for a Class B personal digital device, pursuant to Subpart B of Part 15 of FCC Rules. Only peripherals (computer input/output devices, terminals, printers, etc.) certified or verified to comply with the Class B limits may be attached to this equipment. Operation with non-certified or non-verified personal computer and/or peripherals is likely to result in interference to radio and TV reception.
The connection of a non-shielded equipment interface cable to this equipment will invalidate the FCC Certification of this device and may cause interference levels which exceed the limits established by the FCC for this equipment.
You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your uthority to operate the equipment.

5. APPLICATIONS

* Precast plants
* Commercial buildings
* Foundations
* Road & bridge

6. APPLICABLE BAR SIZES

	Minimum	Maximum
RB397	#3 × #3	#5 × #6

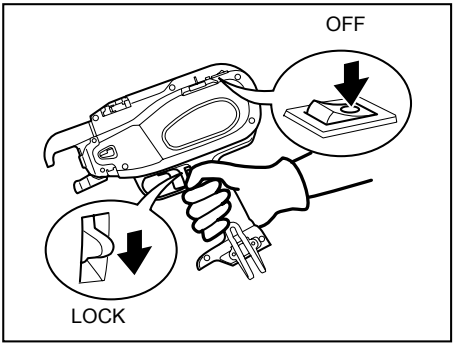
7. ABOUT PRODUCTION YEAR

This product bears production number in the body. The two digits of the number from left indicates the production year.

(Example)
08826035D
T
Year 2008

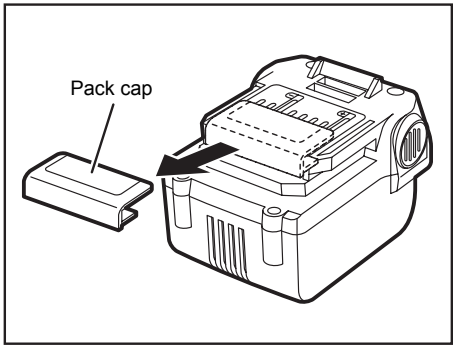
4. BATTERY INSTRUCTIONS

1. Charging

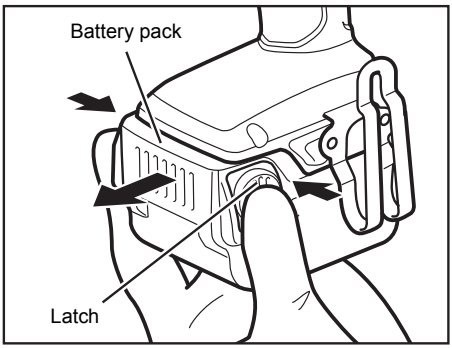


WARNING

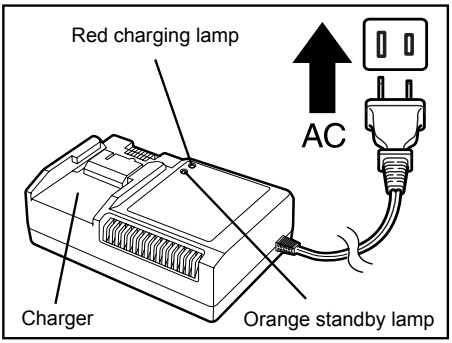
- **Before removing the Battery pack from the tool, set the Main switch at OFF and lock the Trigger.**



① A Pack cap that is used to prevent short circuits must be removed from the terminal of the Battery pack.



When charging the Battery pack, remove it by pushing on its latches from both sides while firmly holding the grip of the tool.



② Plug the charger into a wall socket (120V). The red light, a current-carrying indicator, will flash on and off with two short (Pipi) beep sounds.

When the orange standby light is lit

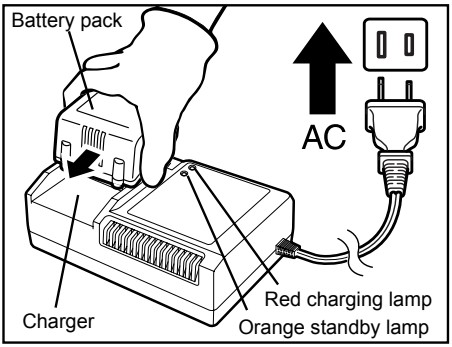
When the Battery pack is hot (after continuous use or exposure to direct sunlight) the Charger will automatically switch to standby to protect the Battery. The orange standby light will be lit until the Battery's temperature lowers to a safe level, The Battery will then be charged automatically.

When the Battery pack is at low temperature

When the Battery pack is at low temperature, its charging is automatically suspended until its temperature increases (higher than 41°F (5°C)), in order to protect it, even if it is set in the Charger. Leave the Battery pack at normal temperature in the room for some time, and then, charge it again.

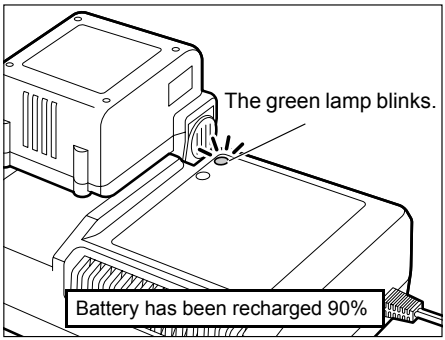
When the orange standby light blinks

This indicates the Battery cannot be charged. Unplug the Charger and check the charging receptacle. If there are any foreign objects, remove them with a soft dry cloth. If the orange light still blinks or there are no foreign objects, there may be a problem with the battery or charger. Return to dealer for service.

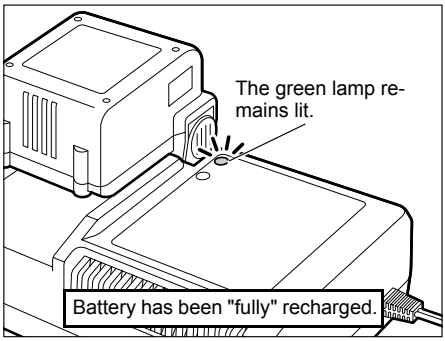


③ Charge the Battery pack.

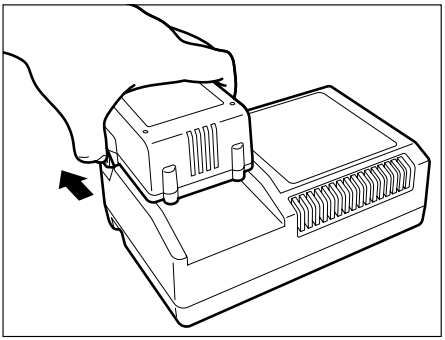
(1) Fully insert the Battery into the receptacle on the Charger until it sits securely on the end.
(2) Charging will start automatically and will be indicated by the red charging light with beeps.
(3) Charging time is approximately 30 minutes (90% capacity). This will vary by temperature and source voltage.
(4) For batteries those are at low temperatures (50°F (10°C) or lower), charging time must be extended longer. When charging at low temperatures, both of the red and the orange charging light will be lit.



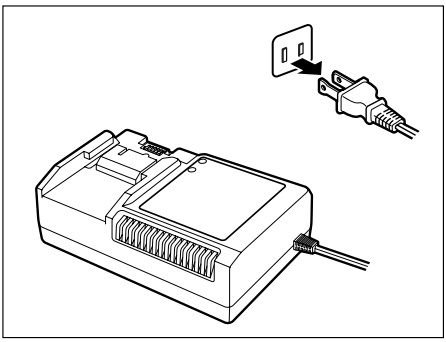
④ When the battery pack has been recharged, the "red" lamp turns off and the "green" lamp blinks.
The "green" LED lamp blinks slowly and a long beep sounds for approximately 2 seconds. Now, the battery has been recharged to approximately 90% of its capacity. Quick charging takes approximately 30 minutes (however, the recharging time and capacity slightly change depending on the ambient temperature and power voltage).



You can use the battery pack when quick charging is complete. However, if you leave the battery pack on the charger, recharging will continue. When the battery is fully recharged (to 100% capacity), the "green" LED lamp lights up (and a long beep sounds for approximately 2 seconds).



(1) After you have recharged the battery pack, remove it from the charger.



(2) Unplug the charger power cord from the wall socket.

Regarding tying times per charge, a brand-new battery ties approximately 1600 times per charge. The tying times per charge will be decreased gradually by repeated re-charge until the Battery becomes unusable. The tying times per charge depend on temperature and the Battery condition.

CAUTION

- When the battery pack is fully discharged, do not leave it for a long time without recharging. If the fully discharged battery pack is removed from the system and left for a long period of time, the battery pack may become damaged. Recharge the battery immediately when it has been discharged.
- Do not leave the battery pack on the charger. If the above is not observed, a weak current will continue to flow and the battery pack may become damaged. When recharging is complete, always remove the battery pack from the charger.

Battery pack breakdowns

If the following conditions occur, bring the Battery and Charger to your dealer.

- The red charging lamp does not flash when the charger plug is inserted into main power source outlet (When the Battery pack is not inserted in the charger.)
- Neither the red charging lamp nor the orange standby lamp lights or flashes when the Battery pack is inserted in the charger.
- The orange standby lamp does not change to the red charging lamp even after more than 1 hour.
- The red charging lamp does not change from constant to flashing light even after more than 90 minutes. (except at low temperatures)

Indication of Quick Charger Lamps

Charger LED lamp	Buzzer sound	Recharging status	
Red lamp blinks. It blinks every second.	The power cord is plugged into the receptacle. Two short beeps (Pi, pi)	The charger is powered.	The charger power cord is plugged into a wall socket.
Red lamp lights. It remains lit.	The battery pack is mounted. One short beep (Pi)	The battery is being recharged.	Quick recharging continues.
The green lamp blinks. It blinks every second.	The battery has been recharged. A long beep for approx. 2 seconds (Piii...)	The battery has been recharged.	The battery has been recharged to approx. 90% of its capacity. If you leave the battery pack on the charger, recharging will continue.
The green lamp lights up. It remains lit.	Fully recharged. A long beep for approx. 2 seconds (Piii...)	Battery is "fully" recharged.	Recharged to 100% capacity.
The red lamp lights up. The orange lamp lights up. They remain lit.	—	Protective charging	The battery is recharged with a low current to protect the charger and battery.
The orange lamp lights up. It remains lit.	—	Standby	If the temperature of the battery pack is too high: Battery recharging starts automatically when the temperature drops below the limit. If the temperature of the battery pack is too low: Place the battery pack in a room temperature location for a while, then retry recharging it.
The orange lamp blinks. It blinks quickly (0.1 sec ON and 0.1 sec OFF).	Not possible to recharge. Short continuous beeps for approx. 10 seconds (Pi, pi, pi, pi,...)	Not possible to recharge.	Unable to recharge the battery. The battery pack slot is contaminated, or the battery pack has failed.

∗ For batteries those are at low temperatures (50°F (10°C) or lower), charging time must be extended longer.

Service Life of the Battery Pack

If any condition described below is observed, the battery pack is at the end of its service life. Replace it with a new one.

- Although the battery pack has been properly charged (fully charged), a great drop in tying time has been noticed.

CAUTION

Do not charge the battery pack when this happens. If the motor's rotational speed slows down, the power of the battery pack is considered to be nearly depleted. Using the tool more will cause it to overdischarge, resulting in a shortened service life of the battery pack and also in functional trouble of the tool's main body.

CAUTION

Do not use a battery pack when its service life is finished.
This will cause functional trouble in the tool's main body. Also charging a battery pack that is out of service life will lead to functional trouble in the battery charger.

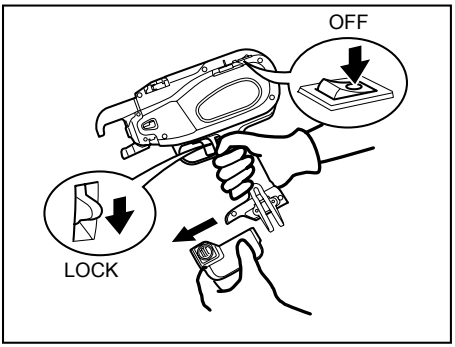
Recycling a Li-ion Battery

The MAX battery pack uses a Li-ion battery, it may be illegal to dispose of this battery into the municipal waste system. Check with your local solid waste officials for details in your area for recycling options or proper disposal.

CAUTION

When disposing of the battery pack, make sure to put a pack cap on its terminal (with insulating tape securing it) to prevent short circuits.

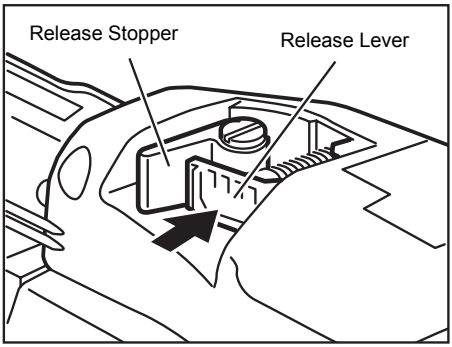
5. OPERATING INSTRUCTIONS



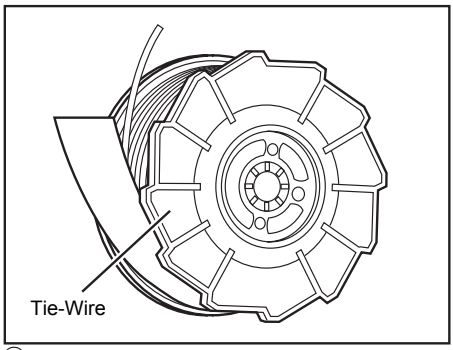
1. How to set the Tie-Wire

WARNING

- **Be sure to set the Main switch to off, to lock the Trigger, and detach the Battery pack.**



① Press the Release Lever of this equipment, and confirm that the Release Lever is caught in the Release Stopper.

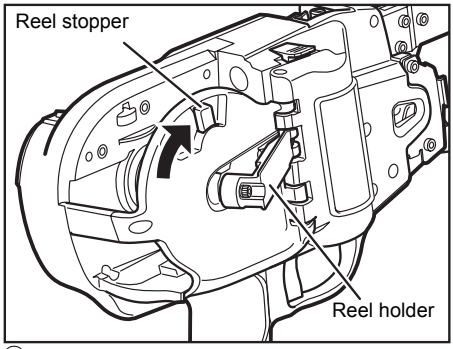


② Peel off the tape fixing Tie-Wire by about 2" (5cm). Stretch out the tip of the wound Tie-Wire.

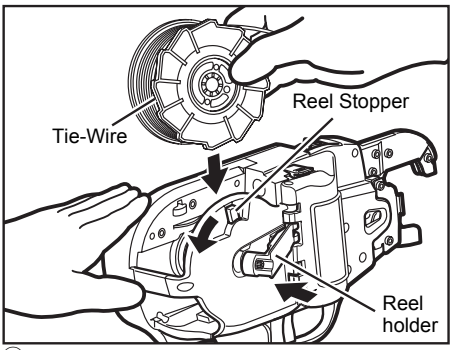
BE SURE TO USE ONLY THE SPECIFIED TIE-WIRE (MAX TW897A).

The use of binding wire that has not been specified may cause breakdown of this equipment. Therefore, be sure only to use the specified MAX TW897A. Do not use binding wire that has become rusted, since the use of rusted wire will cause equipment breakdown.

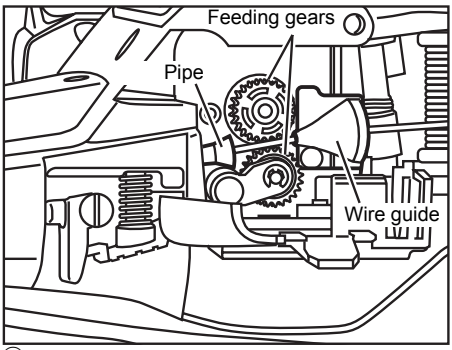
* TW897 cannot be used for RB397.



③ Push the reel stopper to release the reel holder.



④ Set the Tie-Wire in the tool by matching the side of the Tie-Wire as shown in the picture. Then slide the Reel stopper so that the Reel Holder can be pushed in the Reel. Then push the Reel Holder and fix it by sliding the Reel stopper.



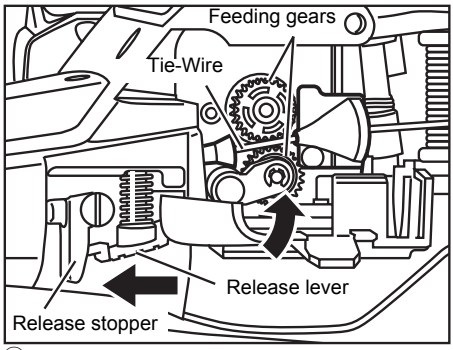
⑤ Insert the tip of the stretched out Tie-Wire into the Wire Guide. Then put it into the Pipe.

WARNING

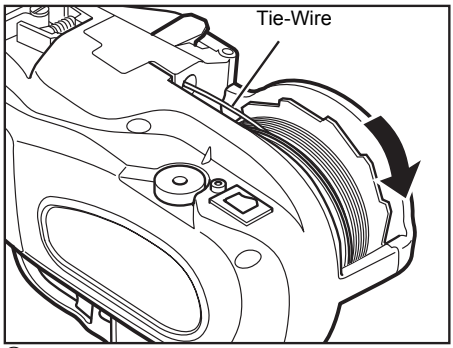
- **Put the Wire around 4" (10cm) inside the Pipe.**
- **The tip of the Tie-Wire should be straightened out to allow it to pass through the wire feeding mechanism.**
  When mounting the Tie-Wire, the wire may become jammed inside the machine if the wire tip is bent.

If the window is dirty and the pipe position can not be confirmed

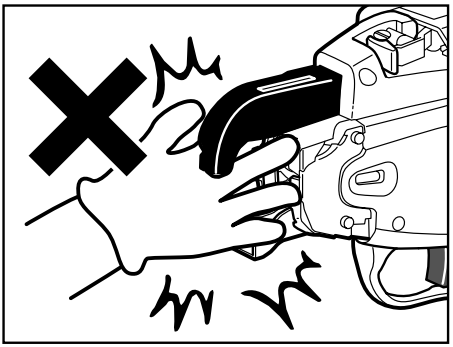
Open the window and wipe off the dirt on the inside of the window with a soft cloth, etc. Close the window again after cleaning to ensure that foreign objects will not be able to enter the machine.



⑥ Release the release stopper, and confirm that the release lever has returned to its original position and that the feeding gears are clamping the Tie-Wire. This completes the Tie-Wire mounting operation.

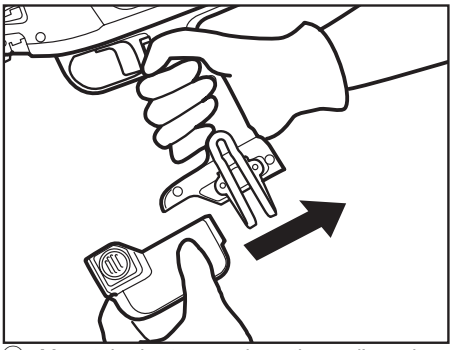


⑦ Remove the tape from the tie-wire completely.
⑧ Remove slack from wire spool.
Make sure the Tie-Wire does not get caught behind the wire spool .This could lead to jamming.

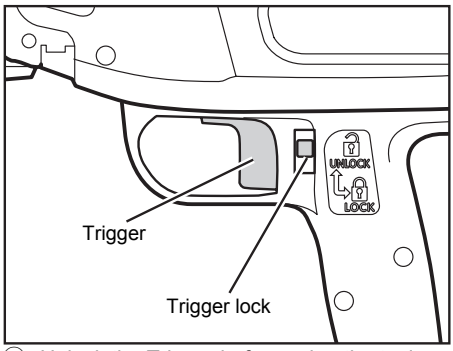


WARNING

- **When setting the main switch to ON, absolutely do not bring your fingers close to the binding part and rotating part of the tool's tip.**
- **Do not switch the main switch ON and OFF in rapid succession, since this operation will cause machine breakdowns.**
- **Do not touch the Tie-Wire during the tying work (while the machine is operating).**

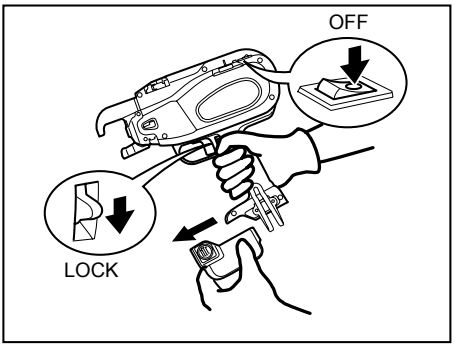


⑨ Mount the battery pack on the tool's main body until a click is heard. Turn the Main Switch on.



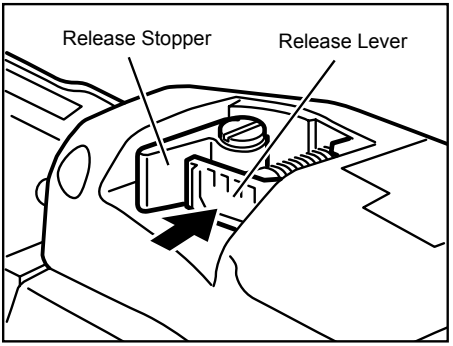
⑩ Unlock the Trigger before using the tool.

2. How to remove the Tie-Wire

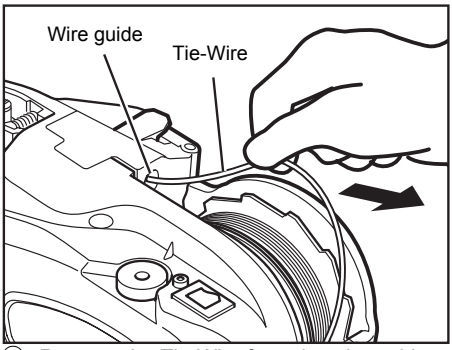


WARNING

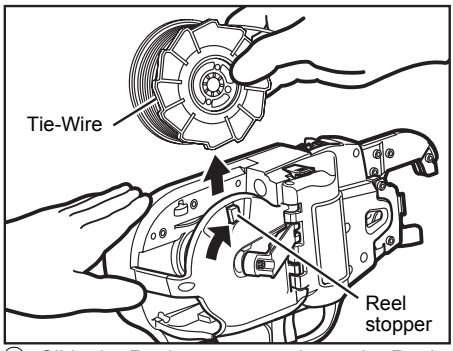
- **Be sure to turn the Main switch OFF, lock the Trigger, and remove the Battery pack.**



① Press the release lever, and confirm that the release lever is caught in the release stopper.



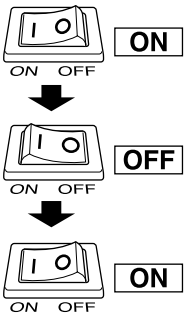
② Remove the Tie-Wire from the wire guide.



③ Slide the Reel stopper to release the Reel holder and remove the Tie-Wire.
④ Mount the new Tie-Wire. (Refer to the Tie-Wire mounting method explanation.)

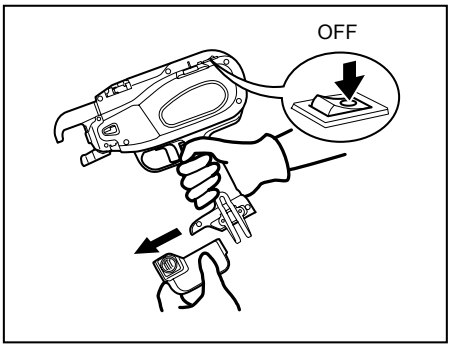
When the Tie-Wire runs out of binding wire
There should be around 12" (300 mm) of the Tie-Wire left at end of the spool. This should be discharged with the old spool and be replaced with a new one.

3. Auto Power-off feature

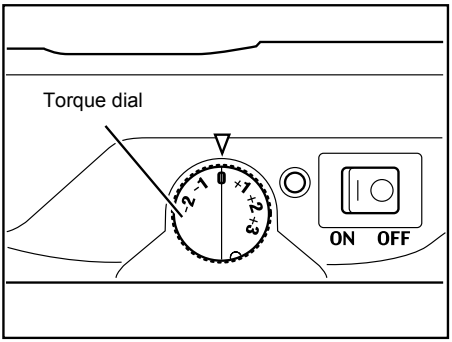


This Re-bar Tier have "Auto Power-off" feature, which saves the power consumption of the Li-ion battery when the tool is not operated.
If the tool is not operated for 30 minutes, the tool is automatically turned off. This is "Auto Power-off".
When the power is turned off automatically, turn the main switch OFF, then turn ON the switch again to operate the tool.

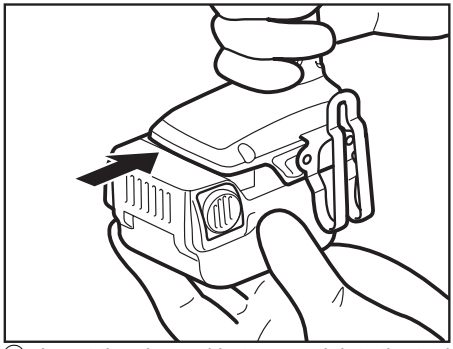
4. Tension adjustment



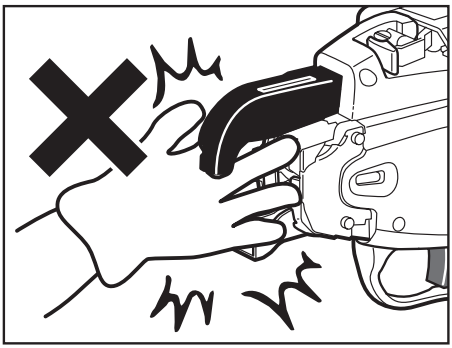
① Be sure to turn the Main switch OFF, to lock the Trigger and detach the Battery pack.



② This dial allows you to adjust wire tension torque slightly.
To increase the tension, turn it in the counterclockwise.
To decrease the tension, turn it in the clockwise.



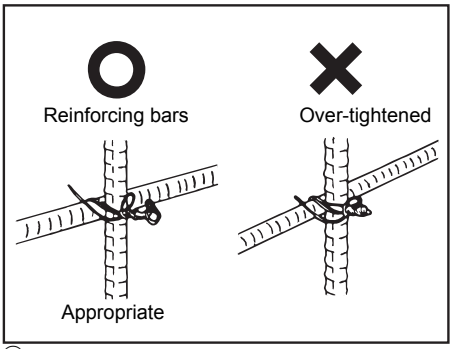
③ Insert the charged battery pack into the tool until a click is heard.



WARNING

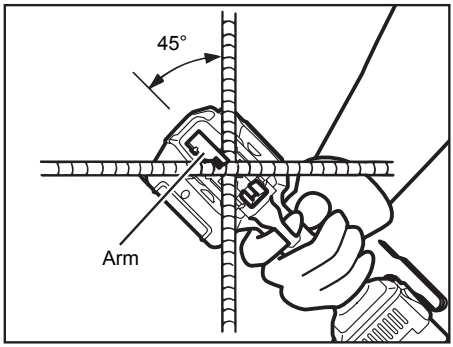
- **When setting the main switch to ON, absolutely <u>do not bring your hand close to the binding part or rotating part of the tip of the tool.</u>**

④ Set the Trigger Lock to UNLOCK and turn on the main switch.

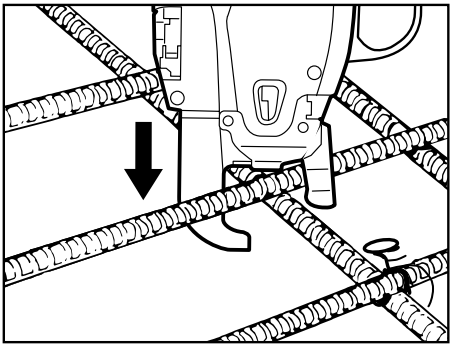


⑤ Test the tool again to check the tie strength.
⑥ If the tie strength is not appropriate, repeat procedures ①~⑤.

5. For proper tightness



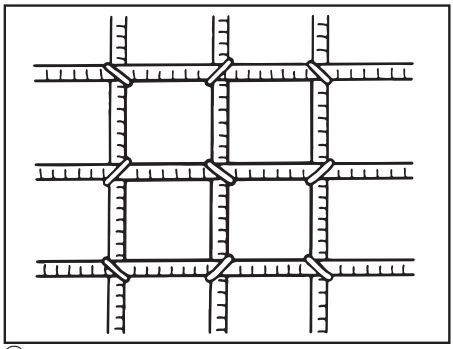
① Tilt the tool 45° angle to the crossed re-bars.



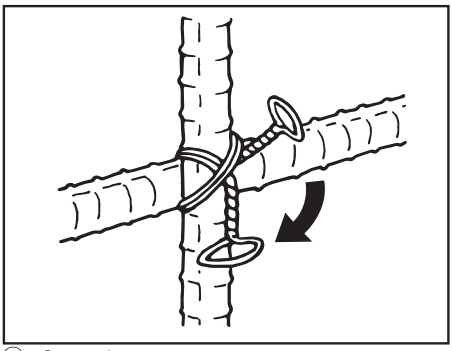
② Apply the tool perpendicularly to the surface of the crossed re-bars.

During tool operation

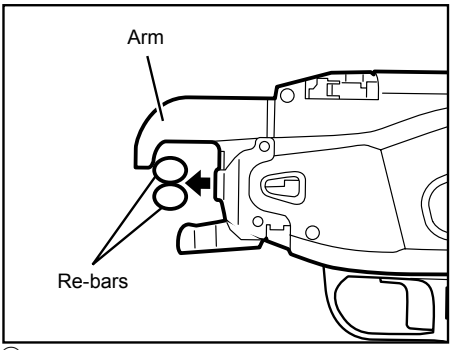
- Do not move the tool during tying operation until the tool stops tying automatically.



③ Tie in alternate direction.



④ Cross tie.
Bent the tail of the first tie before making the second tie.

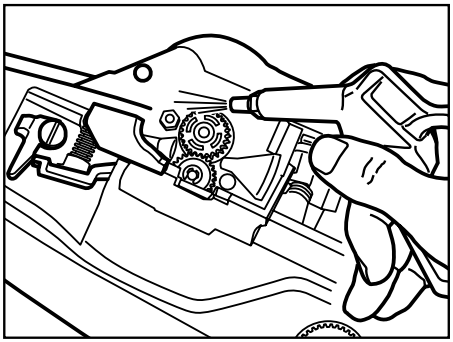


⑤ When you need extra tightness, place re-bars at the top of the Arm part.

6. MAINTENANCE

① Regularly inspect the tool
In order to maintain the performance of the tool, periodically clean up and inspect the tool.

② Do not lubricate the equipment
Absolutely do not lubricate this equipment. Applying lubrication will remove the grease inside of the tool, and cause problem on the tool.

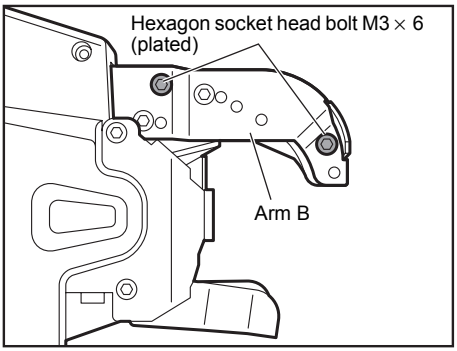


③ Regularly clean the feeding mechanism
In order to maintain the performance of the tool, periodically clean up the mechanism around the feed gear. Using the Air Duster or like, blow the dust and the iron sand off around the feed gear.

7. Cleaning Manual

When the machine operates for long hours, dust and wire cuttings may adhere to the cutter section. In such a case, disassemble and clean the machine according to the following procedure.

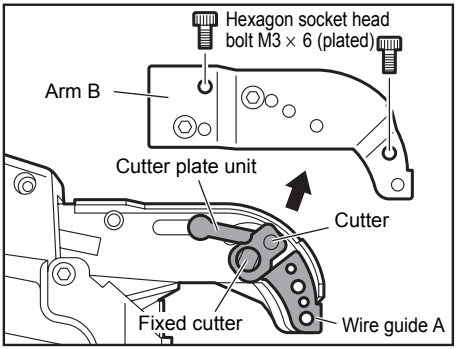
Disassembling



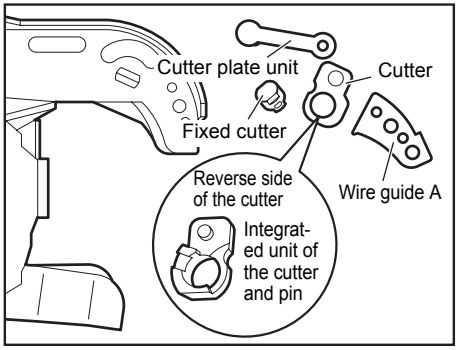
CAUTION

- Do not remove the 2 uncoated bolts.

1. Loosen the 2 (plated) hexagon socket head bolts M3 × 6.

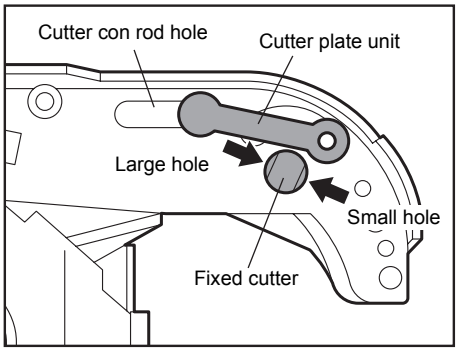


2. Remove arm B and the 2 (plated) hexagon socket head bolts M3 × 6.



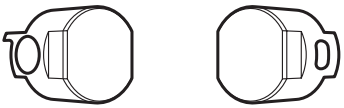
3. Remove the cutter and the fixed cutter, and clean them. (The removable parts are the cutter, fixed cutter, wire guide A and cutter plate unit.)

Assembling

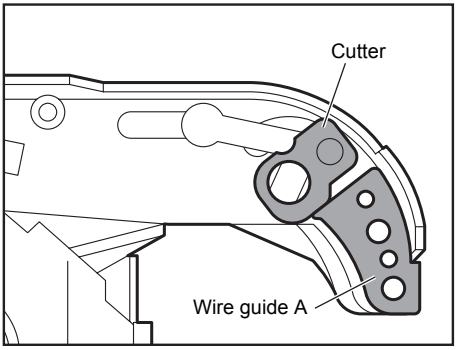


CAUTION

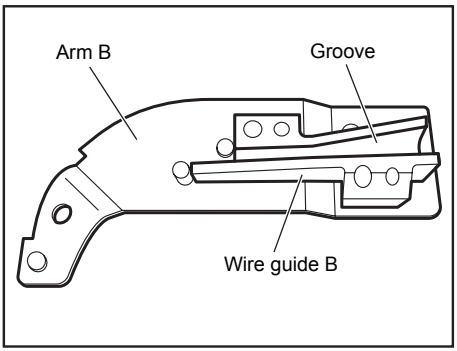
- Assemble the fixed cutter so that the large hole is set to the rear side and the small hole (long hole) is set to the top side.

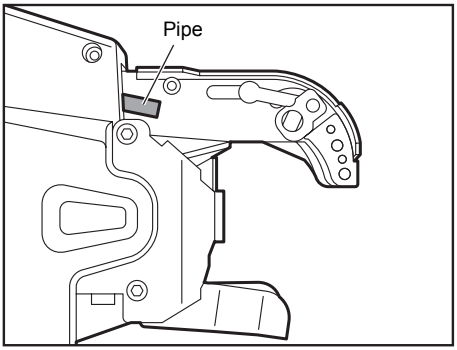


4. Put the pin of the cutter plate unit through the cutter con rod hole and assemble the fixed cutter to the unit.

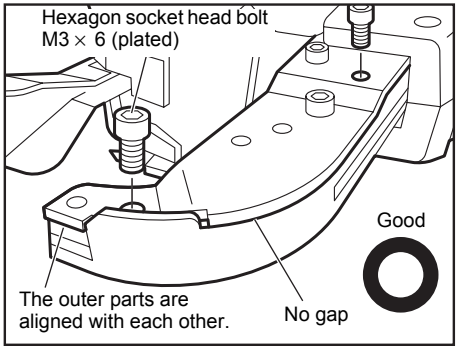


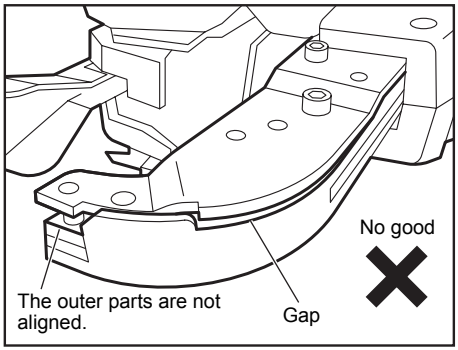
5. Fit the cutter and assemble wire guide A.





6. Align the groove of wire guide B attached to arm B with the pipe, and assemble arm B.





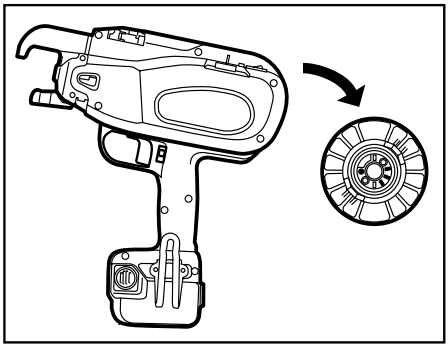
7. **Make sure that arm B is securely assembled and tighten the 2 (plated) hexagon socket head bolts M3 × 6. (Tightening torque: 15.2lbF·inch (172cN·m))**

CAUTION

- Are there any loosening parts?
  Make sure that the outer parts are aligned and the parts are securely assembled without any gap between them.

8. STORAGE

Do not store the tool in a cold weather environment. Keep the tool in a warm area.
When not in use, the tool should be stored in a warm and dry place. Keep out of reach of children. All quality tools will eventually require servicing or replacement of parts because of wear from normal use.



REMOVE REEL OF TIE-WIRE

When you have finished the Tie-Wire, remove the Tie-Wire from the tool.

STORE THE TOOL

When you have finished tying work or when the tool will not be used for a while, switch off the tool, make sure the motor has stopped, lock the trigger, and remove the battery pack. Tool, attachments and accessories should be stored in a well-ventilated dry place where the temperature will not exceed 104°F (40°C).
The battery pack, with a pack cap installed on the pack's terminal to prevent short circuits, should be stored in a well-ventilated dry place where the temperature will not exceed 86°F (30°C).

9. TROUBLE SHOOTING/REPAIRS

The troubleshooting and/or repairs shall be carried out only by the MAX CO., LTD. authorized distributors or by other specialists.

This tool alerts you to the following conditions by means of a warning sound and warning lamp. The warning lamp is illuminated or blinks, and is interlocked with the warning sound. Take a countermeasure according to the following table.

WARNING

- **If any of the following conditions occur, be sure to set the Main switch to OFF before carrying out the countermeasures.**
- **When setting the Main switch to ON, do not touch the tying part of rotating part of the tool's tip. If the problem is not solved by carrying out the following countermeasures, be sure to set the Main switch to OFF and then contact the dealer where the equipment was purchased or MAX CO., LTD. authorized distributors.**

No.	Normal Operation	Problem	Warning Sound	Cause	What to Check	Solution
1.	Power ON →The Tip Axis is initialized and the wire-cutter operates automatically.	No operation takes place.	No sound emitted.	Dead battery (Completely empty)	Confirm the battery is charged.	Perform normal charge. (SEE PAGE 13)
				Electrode plate has been oxidized.	Taking out the battery, see if electrode has been browned.	Polish terminal part of battery pack with dry cloth, etc.
			A long beep (Piii...)	Curl guide is left open.	Open/close curl guide	Fully close curl guide.
			Continuous short beeps (Pi, pi, pi, ...)	Binding wire has been entangled around Twist section.	Turn off power and take out battery to confirm if binding wire has been entangled inside curl guide.	Turning off power, remove binding wire inside curl guide.
			Two short beeps repeated for 10 seconds (Pipi, Pipi, ...), then power off automatically	Battery is empty.	Confirm the battery is charged.	Perform normal charge. (SEE PAGE 13)
				The battery pack is inserted when the Main switch is ON.	Make sure to insert the battery pack, only when the Main switch is OFF.	Set the Main switch to OFF, then ON.
2.	Power On →LED lamp is lit. →No operation over 30 minutes →LED lamp goes off. →Although pulling the trigger, no operation takes place.	No operation takes place, although pulling the trigger	A short beep (Pi), (before LED lamp goes off)	Normal operation. (SEE PAGE 21)	Set the Main switch to OFF, then ON.	Set the Main switch to OFF, then ON.
3.	Trigger ON →Wire sent out.	No sending of wire takes place.	A long beep (Piii...)	Curl guide is left open.	Open/close curl guide	Fully close curl guide.
			Three short beeps repeated (Pipipi, pipipi, ...)	Tie-Wire has been run out.	Check if the Tie-Wire has been run out or not.	Set the new Tie-Wire.
				Wire caught inside reel.	Check if wire inside reel has been loosened and caught.	Remove fray on reel.
				Cutter section is blocked with foreign substance.	Confirm functioning of Cutter section.	Either wipe Cutter section with dry cloth or blow it with air.
			Five short beeps (Pipipipipi, pipipipipi)	Motor has been heated.	Warning sound does not go continuously. It occurs only when trigger is pulled.	Halt Machine and cool it down.

No.	Normal Operation	Problem	Warning Sound	Cause	What to Check	Solution
3.	Trigger ON →Wire sent out.	Sending of wire is stopped halfway.	Four short beeps repeated (Pipipipi, pipipipi, ...)	Tie-Wire is not set in the tool.	Check if the Tie-Wire has been set in the tool.	Set the Tie-Wire.
				Binding wire not of designated types has been used.	Confirm reel side face.	Use MAX Tie-Wire TW897A.
			Three short beeps repeated (Pipipi, pipipi, ...)	Binding wire has been entangled inside reel.	Confirm reel winding	Remove fray on reel.
4.	Binding wire draws a circle.	Curl is disordered and steps out of curl guide.	No sound emitted.	Wire, by hitting Reinforcing bars, was repelled.	Check if wire hits Reinforcing bars at binding.	Pay attention so that wire does not hit Reinforcing bars at binding.
5.	Wire is subject to cutting.	No wire cutting takes place.	No sound emitted.	Cutter section is blocked with foreign substance.	Confirm function of Cutter section.	Either wipe Cutter section with dry cloth or blow it with air.
6.	Wire twisting takes place.	Wire gets entangled.	No sound emitted.	Wire, by hitting Reinforcing bars, was repelted.	Check if wire hits Reinforcing bars at binding.	Pay attention so that wire does not hit Reinforcing bars at binding. (SEE PAGE 23)
			A short beep and a long beep, repeatedly. (Pipipipipipi...)	Binding wire has been entangled around Twist section.	Turn off power and take out battery to confirm if binding wire has been entangled inside curl guide.	Turning off power, remove binding wire inside curl guide.
		Binding power is weak.	No sound emitted.	Reinforcing bars is not of designated size.	Confirm size of Reinforcing bars to be bound. (SEE PAGE 12)	Use appropriate diameter scope.
				Erroneous handling such as improper application of Machine.	Confirm how to apply Machine to Reinforcing bars.	Turning Torque dial in + and inserting in vertical direction, use as tilting at 45°. (SEE PAGE 22 AND 23)
				Function of curl guide switch	Check if curl guide is left open at binding.	Do not operate Machine until binding is completed.
		Twisting-off takes place.	No sound emitted.	Reinforcing bars is not of designated size.	Confirm size of Reinforcing bars at binding. (SEE PAGE 12)	Use appropriate diameter scope.
				Erroneous handling such as improper application of Machine.	Confirm how to apply Machine to Reinforcing bars.	Turning Torque dial in – (minus) and inserting in vertical direction, use as tilting at 45°. (SEE PAGE 22 AND 23)
		Works properly	Two short beeps. (Pipi)	Low power remains in the Battery pack.	Confirm the battery is fully charged.	Perform normal charge after the tying speed slows down considerably.
				The tool is used at low temperature.	Check the temperature at the job site.	Leave the tool and the battery pack at normal temperature in the room for some time, and then continue the operation.